



Emprise™ 7000

Highly reliable and scalable virtual SAN system

As Data Grows and Becomes

ever more critical to your organization, your storage solution must provide extreme reliability, along with flexible scale. However, traditional disk-based systems all suffer from one problem: Disk drives fail. It is an accepted fact of data center life. The more drives you have, the more failures you must deal with. In fact, the majority of storage-related service events are caused by drive failures.

This is a time-consuming, risky, and expensive problem. When a drive fails, someone must replace it. That takes valuable time and puts your data at risk. And as the size of drives increases, so does the rebuild time. In addition, a good portion of your maintenance agreement cost is undoubtedly for such anticipated replacements.

However, this is not the way things have to be. Xiotech Corporation is changing the rules of the storage game, with revolutionary technology that eliminates virtually all disk-related service events. This solution delivers reliability and scalability unmatched in the storage industry—and comes with an unprecedented five-year hardware warranty.

The Solution: Emprise 7000

Xiotech's Emprise 7000 system is a nested, virtualized solution based on Intelligent Storage Element (ISE™) technology and Xiotech's proven virtualized, distributed cluster architecture.

The ISE is a tightly integrated storage environment, purpose-built to maximize reliability and performance. Each ISE supports one or two sealed DataPacs

(capacity modules) and dual Managed Reliability Controllers, which locally manage cache, data recording processes, and more. This unique design, along with Xiotech's proven management software, delivers a full-featured storage solution that is extremely reliable, scalable, and easy to use.

Emprise 7000 Highlights

- **Reliability:** The ISE's patented diagnostics and self-healing capabilities effectively **eliminate storage-related service events**. With Xiotech's proven distributed cluster architecture and a variety of replication options, Emprise 7000 addresses all the causes of downtime to keep your data and applications online and accessible.
- **Scalability:** Each ISE offers 20 to 40 times more capacity than a typical drive, enabling Emprise 7000 to **scale from a terabyte to one petabyte within a single system**—with fewer managed components. As you add ISE modules, you not only gain extra capacity, you also add cache and data processing power for faster system performance.
- **Ease of Use:** Emprise 7000 systems **simplify both storage and server management**, lowering operational costs. Existing IT personnel can effortlessly manage growing storage, leaving more time to focus on strategic initiatives.
- Technical innovation isn't the end of the story. Xiotech is strongly committed to your satisfaction. We offer the tools, training, and services that help you make the most of your storage solution.



Emprise 7000 in More Detail

Maximum Reliability

Emprise 7000 eliminates the downtime and service events common in other systems—to keep your data and applications online, available, and ready for business.

- **Powered by ISE Technology:** Patented technology provides more than 100 times the reliability of regular disk drives.
 - » Reconditioning and error-detection processes fix potential problems before failure occurs.
 - » Self-healing capabilities enable recovery from most failures.
 - » Spare-in-place technology automatically rebuilds data within the DataPac when needed. And data can be recovered in increments smaller than an entire disk drive, speeding rebuild time.
- **No planned downtime:** On-the-fly storage provisioning and changes eliminate virtually all planned downtime.
- **Automatic Component Failover:** Automatic failover and failback within the system and across clustered storage components ensure continued availability in the event of local outage.

Unmatched Ease of Use

Because Emprise 7000 is so easy to use, existing IT staff can manage more storage, and there is no need for vendor consultants or storage specialists.

- **Easiest Storage and Server Management Available:** The intuitive ICON Manager interface makes all configuration and changes simple, point-and-click operations.
- **Automated Management:** ICON Services integrates with other Web Services based tools to automate and customize storage management.
- **Provision Once:** Intelligent Provisioning delivers just the capacity you need when you need it—without the risk of over-subscribing.
- **Fast, Easy Server and Software Maintenance:** No server-side software and powerful boot-from-SAN capabilities make software upgrades and server replacement fast and easy.

Superb Scalability

Emprise 7000 offers tremendous flexibility and scalability. You can easily add capacity, performance, and features as your needs change and budget allows.

- **One Terabyte to One Petabyte:** With 20 to 40 times more capacity than a typical drive, the ISE enables system scaling to one petabyte with the fewest number of manageable components.
- **Scalable Performance:** As capacity grows, so does performance. Each new ISE brings with it an impressive boost in system processing power.
- **Flexible System Deployment:** Modular controllers and ISE modules can be deployed when and where they are needed—in a single rack or distributed across campus.
- **Tiered Storage:** Multiple DataPac options provide cost-effective storage for your unique needs. You can select from DataPacs optimized for capacity, performance, and more.

Full Feature Set

- **Local and Remote Replication Options:** Emprise 7000 integrates effortlessly with Xiotech's powerful data protection offerings:
 - » TimeScale® Copy: Local copy, mirror, and swap of volumes within a system.
 - » TimeScale GeoRep: Asynchronous and synchronous remote replication between Emprise 7000 and Magnitude 3D systems.
 - » TimeScale GeoRAID™: Automatic management of two images of a volume across two locations within a storage system—with transparent failover during local outage.
 - » TimeScale CDP: Continuous data protection with recovery to any point in time.
- **Capacity Sharing Across Systems:** Virtual links enable you to share capacity and data across Emprise 7000 and Magnitude 3D systems.
- **Remote Monitoring and Alerts:** Xiotech Support remotely monitors your system and alerts you of any potential issues before they affect availability.

Emprise 7000 Specifications

System Highlights

Description	Details
Storage Capacity	1.1 to 1,024TB
ISEs per System (max)	64
Data Recording	ISE protected RAID, Emprise 7000 mirroring
Standard Host Interfaces	4 Fibre Channel (4 Gbps)
Additional Host Interfaces (optional)	4 Fibre Channel (4 Gbps) or 4 iSCSI
Server Connections (max)	248
Storage Volumes (max)	512
Cache (max)	64GB (1GB per ISE)
Operating System Support ¹	Microsoft® Windows®, VMware® ESX Server, Novell® NetWare® and SUSE® Linux Enterprise Server, Red Hat® Enterprise Linux®, HP-UX, IBM® AIX®, Sun™ Solaris™, Mac OS®

Storage Tiers

All Emprise 7000 systems support three tiers of storage: Performance, Balanced, and Capacity.

- Performance Tier: Best performance for transaction-based applications, such as databases.
- Capacity Tier: Lowest cost storage for low usage file, archiving, and disk-to-disk backup applications.
- Balanced Tier: Best price/performance for general purpose and mixed application usage.

DataPac Types	Capacity ²	Weight (lb/kg)
Performance Tier DataPac	1.1 TB	19.65 / 8.9
Balanced Tier DataPac	2.4TB	19.65 / 8.9
Capacity Tier DataPac	8.0TB	20.35 / 9.3

Reliability, Availability, and Management

Parameter	Description
Self-Healing Technology	Patented diagnostic and reconditioning processes prevent issues and repair components in place, avoiding disk-related service events
Data Replication	Local and remote replication, snapshot, and CDP options
Storage Management	<ul style="list-style-type: none"> • ICON Manager: Management interface providing the easiest management ever available, plus detailed control for more experienced users • ICON Services: Automation, customized reporting, and integration with other Web Services aware applications and tools • Intelligent Provisioning: Automatic volume growth without the risk of over-subscription
Capacity and System Upgrades	<ul style="list-style-type: none"> • Nondisruptive ISE, DataPac, and capacity addition options • Nondisruptive controller and software upgrade options¹
Controllers and Chassis	Dual controller, physically independent controller chassis and ISE modules
System Failover	Intra-controller and cross-cluster failover, no host software required
Hot-Swappable Components	Redundant, hot-swappable controllers and power supplies

¹ Some restrictions apply. Consult your Xiotech account representative for details.

² 1TB = one trillion bytes

ExpertCare Support



Support Type	Hardware (Parts, Labor)	Software	Response
Basic Warranty	Five years	90 days	<ul style="list-style-type: none"> • 24x7, four-hour on-site support and shipment of replacement parts² • 24x7 toll-free phone support • Same business day email response
Optional Upgrades	Warranty and maintenance extensions		

Physical Specifications

Component	Depth (in/cm)	Width (in/cm)	Height (in/cm)	Weight (lb/kg)
Dimensional Controller Node	25.6 / 65.0	16.7 / 42.0	3.5 / 8.9	53.0 / 24.0
Intelligent Storage Element	28.5 / 72.39	17.5 / 44.45	5.2 / 13.2	99.0 / 44.9 ³
ICON Management Appliance	14.0 / 35.5	16.7 / 42.4	1.7 / 4.3	17.5 / 7.9

System Power Specifications

Component	Voltage	Current (Max)	Power	Heat Dissipation
Dimensional Controller Node	100 / 240 V	2.5 A	500 W	1,706 btu/hr
Intelligent Storage Element	100 / 240 V	6.0 A / 3.0 A	600 W (typical)	2,050 btu/hr
ICON Management Appliance	208 / 240 V	0.45 A	180 W	614 btu/hr

Environmental Specifications

Component	Operating Temperature	Operating Humidity	Maximum Altitude	Acoustic Output
Emprise 7000 System	50–95° F 10–35° C	20–80% (noncondensing)	8,000 ft 2,438 m	< 65 dBA

Regulatory Approvals

Safety	UL 1950, IEC 60950, CB Certification and Report from UL
Electromagnetic Compatibility	FCC (Class A), EN55022 (Class A), EN55024 (Class A), CE Mark

² Support Zone 1 only.

³ Weight without DataPacs.

Specifications subject to change without notice. Visit www.xiotech.com for the most up-to-date information.



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